



7.1.4 Water conservation facilities available in the Institution

4. Waste water recycling (STP) at VTU Jnana Sangama, campus Belagavi

The University has established Sewage Treatment Plant of 200 KLD capacity at South end portion of the campus. Currently, 100 to 150 KLD of waste water and sewage water is being treated on daily basis and the treated water is used for gardening purpose within the campus.




Director

**Internal Quality Assurance Cell
(IQAC)
Visvesvaraya Technological University,
Belgavi - 590018**



7.1.4 Water conservation facilities available in the Institution



Sewage Treatment Plant


Director

**Internal Quality Assurance Cell
(IQAC)
Visvesvaraya Technological University,
Belgavi - 590018**

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

Name of work:- Providing, Supplying, installing, Testing & commissioning of Automated Non bacteriological sewage Treatment Plant of 200 KLD based on Advanced Nano-Technology enabled EMR (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at VTU, Jnana Sangama" Belagavi

Name of Contractor:- M/s. Utopia Automation & Control Pvt. Ltd., Satara

RA Bill No.2nd & Final

SNo	Item Name	Item Code	Unit	Quantity	Rate	Previous Paid		Now to be Paid		Upto Date	
						Qty	Amount	Qty	Amount	Qty	Amount
1	Civil Works :Earth work excavation for Pipe line trenched including depositing on bank with lead including shoring, strutting barricading, danger lighting and using sight rails and boning rods at every 100 meters wherever necessary as directed by engineer in the following strata etc. complete : i) in all kinds of soil mixed with boulders upto 30cms size and exclusive if disintegrated rock for 0 to 2.0m depth	1	Cum	100.00	145.0	98.11	14225.95	26.89	3899.05	125.00	18125.00
	Above 125% is approved in the 95th Estate Board				164.55	0.00	0.00	40.32	6634.66	40.32	6634.66
2	Refilling pipelines trenches and foundation with selected available earth from trench excavation and foundation including watering, consolidation in layers of 15cms thickness including disposing off the surplus earth with all lead and lift	2	Cum	100.00	50.0	100.20	5010.00	0.00	0.00	100.20	5010.00


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Belgavi - 590018

4.1

SNo	Item Name	Item Code	Unit	Quantity	Rate	Previous Paid		Now to be Paid		Upto Date	
						Qty	Amount	Qty	Amount	Qty	Amount
3	Providing and laying reinforced cement pipes NP2 of 150mm dia for swerage line including pointing ends and fixing collars with cement mortar 1:1 running on MS saddle support and BBM masonry Pedestal with plaster at 3m. Center to Center and Inspection chamber/ Manhole at every 20m. Including all neccessary excavation in all type of soil and refilling etc complete as per existing ground levels with proper gradation to drain in proposed collection tank.including cost of all material, labour, curing, complete as per specification, Drawing and direction of EIC (Excluding cost of chambers/Manhole)	3	m	570.00	1160.0	595.50	690780.00	117.00	135720.00	712.50	826500.00
	Above 125% is approved in the 95th Estate Board				1160.00	0.00	0.00	89.50	103820.00	89.50	103820.00
4	Providing and constructing of Manhole Chambers conical in shape at top with CC 1:3:6 foundation using 40mm and down size graded metal of approved quality and with an offset of 0.15mts around the chamber and brick masonry in CM 1:4 plaster with bricks of approved quality and CM plaster 1:3 proporation 12mm thick inside and outside except for the conical surface outside where the thickness of plaster shall be 20mm thick with 1 to 6 slope in the concerte towards the central drain, finished smooth and fixing of pipes in CC CC 1:2:4 with graded metal of 20mm and down size including supplying and fixing SFRC manhole frame and cover conforming to IS 12592 (part-I) 1988 & IS 12592 (Part-II) : 1991 with latest amendments in CC 1:2:4, supplying and fixing of plasteric foot steeps staggred at 30 cms apart as directed, watering, curing, barricading, danger, lighting, pouring tar over MH frame and cover cost of tar, shoring, strutting, dewatering, engraving, manhole No on the inner conical surface etc as per the direction and fixing including earth work in all soils etc complete, raod box to fixed in CC 1:3:6 and plastered with CM 1:3, 20mm thick with all lead and lift curing for 10 days per spec (KUWSDB SR) : For 1200 mm dia upto	4	Nos	16.00	12000.0	0.00	0.00	0.00	0.00	0.00	0.00
5	For upto 1.0m & upto 2.0 mt depth	5	Nos	8.00	24500.0	10.00	245000.00	0.00	0.00	10.00	245000.00


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4.2

SNo	Item Name	Item Code	Unit	Quantity	Rate	Previous Paid		Now to be Paid		Upto Date	
						Qty	Amount	Qty	Amount	Qty	Amount
	Above 125% is approved in the 95th Estate Board				23316.65	0.00	0.00	32.00	746132.80	32.00	746132.80
6	(Considering Collection Tank of Volume 126 Cum., Treated water Tank of Volume 185 Cum., Sludge Tank of Volume 126 Cum.) Providing and laying in position reinforced cement concrete Design mix M25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregate @0.47cum, with superplasticiser @ 3lts confirming to IS9 103-1999 Reaffirmed-2008, machine mixed, concrete laid, vibrated R.C.C. beams, columns of all sizes in foundation plinth and superstructure ground floor level for roof slabs, staircase, lintels, columns, RCC Walls, including cost all materials, labour, HOM of machinery, curing, complete as per specifications.	6	Cum	93.00	5500.0	83.23	457765.00	33.02	181610.00	116.25	639375.00
	Above 125% is approved in the 95th Estate Board				5845.06	0.00	0.00	12.77	74641.42	12.77	74641.42
7	Providing T.M.T. Steel reinforcement for RCC work including straightening, cutting, bending, hooking, placing in position, lapping and or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks, and wastage shall not be measured and paid) cost of materials, labour HOM of machinery complete as per specifications for Ground Floor, PWD SR 2013-14, P- 19, I-4.46.3	7	Q	35.00	7200.0	43.75	315000.00		0.00	43.75	315000.00
	Above 125% is approved in the 95th Estate Board				7268.47	0.00		36.990	268860.71	36.99	268860.71
8	Providing and removing centering, shuttering, strutting propping etc and removal of formwork for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth beams and string courses cost of all materials, labour complete as per specifications. Specification. PWD SR 2013-14, P- 17, I-4.31	8	Sqm	600.00	300.0	336.00	100800.00	328.74	98622.00	664.74	199422.00

Director

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4.3


SNo	Item Name	Item Code	Unit	Quantity	Rate	Previous Paid		Now to be Paid		Upto Date	
						Qty	Amount	Qty	Amount	Qty	Amount
9	Extra for use of water proofing compound in cement concrete of mix M25 at one kg of compound per bag of cement	9	Cum	90.00	300.0	83.23	24969.00	29.27	8781.00	112.50	33750.00
	Above 125% is approved in the 95th Estate Board				257.43			9.23	2376.08	9.23	2376.08
10	Providing and laying in position plain cement concrete of mix 1:3:6 using 40mm and down size graded granite metal machine mixed, concrete laid in layers not exceeding 15cms. Thick well compacted, in foundation and plinth, including cost of material, labours, HOM of machinery, curing complete as per specification	10	Cum.	30.00	4100.0	37.50	153750.00	0.00	0.00	37.50	153750.00
	Above 125% is approved in the 95th Estate Board				4438.82	0.00	0.00	1.66	7368.44	1.66	7368.44
11	Filing in foundtaion/below floor with granite/trap/trap/ broken metal 150 mm and down size with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift complete as per specification	11	Cum.	40.00	900.0	50.00	45000.00	0.00	0.00	50.00	45000.00
	Above 125% is approved in the 95th Estate Board				1710.11	0.00	0.00	4.32	7387.68	4.32	7387.68
12	Providing and constructing burnt brick masonry for basement and super structure with approved quality of non-modular bricks of standard size of class designation 35 with Cement mortar 1:6 including cost of materials, labour charges, scaffolding, curing complete as per specifications for Ground Floor	12	Cum	20.00	5000.0	6.44	32200.00	18.56	92800.00	25.00	125000.00
	Above 125% is approved in the 95th Estate Board				4686.15	0.00	0.00	27.74	129993.80	27.74	129993.80
13	Providing 18mm thick cement plaster in single coat with cement mortar 1:4, to Cement plaster including rounding off corners wherever required smooth rendering,; Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications	13	Sqm	150.00	300.0	0.00	0.00	187.50	56250.00	187.50	56250.00
	Above 125% is approved in the 95th Estate Board				194.84	0.00	0.00	1139.46	222012.39	1139.46	222012.39

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5.4

SNo	Item Name	Item Code	Unit	Quantity	Rate	Previous Paid		Now to be Paid		Upto Date	
						Qty	Amount	Qty	Amount	Qty	Amount
14	Providing & Fixing Precoated Trapezoidal shaped sheets of 24 gauge of required size to enclose water treatment panel (roof size 9mx7m) which is proposed to be installed over collection tank with necessary M.S. structural steel supporting roofing arrangements etc. complete. rate including all material, Labour, fabrication etc.complete As per the direction of EIC	14	Sqm	76.00	1180.0	0.00	0.00	95.00	112100.00	95.00	112100.00
	Above 125% is approved in the 95th Estate Board				1100.00	0.00	0.00	53.00	58300.00	53.00	58300.00
15	Providing and laying red oxide flooring 40mm thick with an under layer of 30mm thick M-25 cement concrete, using broken granite metal of 12.5mm nominal size and top layer of 10mm thick plaster with 1:3 CM mixed with red oxide finished with floating coat of neat cement mixed with red oxide, including cost of material, labours, curing complete as per spec,	15	Sqm	63.00	350.0	0.00	0.00	78.75	27562.50	78.75	27562.50
	Above 125% is approved in the 95th Estate Board				559.27	0.00	0.00	79.59	44512.30	79.59	44512.30
16	Providing and fixing pull and push type rolling shutter of approved make out of 18gauge, 75mm widw cold rolled steel laths of convex corrugation, with side guides and bottom rail, with interlocking arrangements for steel laths by means of alternate clips, suspension shft with high tension coil type springs two numbers, mounted on specially designed pip shaft, with bracket plates, guide channels, ball bearing arrangements, for inside & outside locking with push and pull operation complete including pulling hooks, 4 Nos, handles with all fittings and accessories, painted with a coat of red lead paint(without top cover) cost of materails, labour, HOM of machinery complete as per spec.	16	Sqm	3.50	3500.0	0.00	0.00	4.38	15330.00	4.38	15330.00
	Above 125% is approved in the 95th Estate Board				3262.74			2.12	6917.01	2.12	6917.01


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SNo	Item Name	Item Code	Unit	Quantity	Rate	Previous Paid		Now to be Paid		Upto Date	
						Qty	Amount	Qty	Amount	Qty	Amount
17	Providing and fixing top covers made out of 20 gauge MS sheet over pull and push rolling shutter bent to shape including cost of red lead primer coat of painting, material, labours, HOM of machinery complete as per specification	17	Rmt	1.70	550.0	0.00	0.00	1.70	935.00	1.70	935.00
18	Providing and fixing in position anodized aluminium windows and ventilators as per approved drawings with sliding shutters using Two track window frame of size 92x31.75mm bottom section 1.3mm thick, weight 1.07kg/m; sides and top sections 1.3 mm, thick, weight 0.933 kg/m shutter frame section comprising top and bottom section of size 40mmx18mm, wall thickness 1.25mm. weight 0.417 kg./m. shutter side outer 40mmx18mm. wall thickness 1.25mm. weight 0.417 kg/m, shutter interlock section 40mmx26.7mm wall thickness 1.1 mm. thick, weight 0.469 kg/m, the shutters mounted on nylon rollers with approved quality of fixtures such as aluminium handles tower bolts etc.; providing and fixing 5.5mm. thick plain glass for shutters fitted with rubber beading all aluminium sections anodised 12 to 15 microns thick including cutting to required length, joints mitred subdividing the frame tenoned and rivetted, in the assembled frame, stiffened with end clips for corners, angles etc., and fixed to the walls, lintels, floor beams/cills as the case may be, with necessary steel screws, rawl plugs or teak wood gatties including cutting masonry or concrete and	18	Sqm	3.00	4500.0	0.00	0.00	3.75	16875.00	3.75	16875.00
	Above 125% is approved in the 95th Estate Board				3696.83	0.00	0.00	0.25	924.21	0.25	924.21
19	Providing, fabricating and fixing in position MS Grill to windows made out of 12mm x 12mm MS square bars, with spacing @ 125 mm c/c welded over MS flat of 25mm x 6mm size as per design and drawing and fixed with screws and rawl lugs / teakwood guttas, etc. a) Ground Floor	19	Kgs	50.00	95.0	0.00	0.00	62.50	5937.50	62.50	5937.50
	Above 125% is approved in the 95th Estate Board				100.95	0.00	0.00	17.50	1766.63	17.50	1766.63

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**Internal Quality Assurance Cell
(IQAC)**

**Visvesvaraya Technological University,
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SNo	Item Name	Item Code	Unit	Quantity	Rate	Previous Paid		Now to be Paid		Upto Date	
						Qty	Amount	Qty	Amount	Qty	Amount
27	Providing, supplying, Installing, Testing & Commissioning of Sulphuric Acid Dosing System For Equilization Tank, with Dosing Pump, Storage Tank, Side mounted level Gauge, level Switch, isolation valve for water line with all accessories complete. Rate inclusive of all taxes. Make / Model : Positive measuring Equivalent	27	Nos	2.00	147500.0	0.00	0.00	0.00	0.00	0.00	0.00
	75% recommended	PR			110625.00	2.00	221250.00	0.00	2.00	221250.00	
		BR			36875.00	0.00	0.00	2.00	73750.00	2.00	73750.00
28	Providing, fixing, Installing, Testing & Commissioning E clear reactor unit with Transfer Pump with manual valve, Eclear Reactor Unit, Selector Switch, pressure Gauge, manual valve, Ball valve with all accessories complete. Rate inclusive of all taxes. Make / Model : Utopia or Equivalent	28	Nos	1.00	3100000.0	0.00	0.00	0.00	0.00	0.00	0.00
	75% recommended	PR			2325000.00	1.00	2325000.00	0.00	1.00	2325000.00	
		BR			775000.00	0.00	0.00	1.00	775000.00	1.00	775000.00
29	Providing & fixing, Installing, Testing & Commissioning of Dosing Systems For Eclear Reactor with Dosing Pump, Storage Tank, Side mounted level Gauge, level Switch, isolation valve for water line, Costic Dosing Tank, low level switch, high level switch, drain valve, Costic Dosing Pump, manual valve, Strainer Filter For Caustic Dosing, with all accessories etc, transportation etc complete. Rate inclusive of all taxes, Make / Model : Positive measuring or Equivalent	29	Nos	3.00	226666.7	0.00	0.00	0.00	0.00	0.00	0.00
	75% recommended	PR			170000.03	3.00	510000.08	0.00	3.00	510000.08	
		BR			56666.68	0.00	0.00	3.00	170000.03	3.00	170000.03


Director

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4.7

SNo	Item Name	Item Code	Unit	Quantity	Rate	Previous Paid		Now to be Paid		Upto Date	
						Qty	Amount	Qty	Amount	Qty	Amount
30	Providing & fixing , Installing, Testing & Commissioning of Membrane Circulation Unit With Membrane Circulation Tank, with Launderers, low level switch , high level switch, Membrane Ultrafiltration Modules, Cleaning System For UF Membrane, Dosing Pump, Storage Tank, Side mounted level Gauge, level Switch, isolation valve for water line with all accessories etc , transportation etc complete. Rate inclusive of all taxes.Make / Model : Utopia or Equivalent	30	Nos	1.00	3450000.0	0.00	0.00	0.00	0.00	0.00	0.00
	75% recommended	PR			2587500.00	1.00	2587500.00	0.00	1.00	2587500.00	
		BR			862500.00	0.00	0.00	1.00	862500.00	1.00	862500.00
31	Providing & fixing, Installing, Testing & Commissioning of UF Feed Pump and CIP System with Pressure indicator , manual valve, Membrane Back Flush Pumps, Pressure Indicator, manual valve with all accessories etc , transportation etc complete. Rate inclusive of all taxes.Make / Model : Grundfoss or Equivalent	31	Nos	2.00	265000.0	0.00	0.00	0.00	0.00	0.00	0.00
	75% recommended	PR			198750.00	2.00	397500.00	0.00	2.00	397500.00	
		BR			66250.00	0.00	0.00	2.00	132500.00	2.00	132500.00
32	Providing & fixing, Installing, Testing & Commissioning of Activated Carbon Filter with Accessories , pressure Gauge, Drain / Vent Valve, pressure vessel, media, Multiport Valve with all accessories etc , transportation etc complete. Make / Model : Utopia or Equivalent	32	Nos	1.00	280000.0	0.00	0.00	0.00	0.00	0.00	0.00
	75% recommended	PR			210000.00	1.00	210000.00	0.00	1.00	210000.00	
		BR			70000.00	0.00	0.00	1.00	70000.00	1.00	70000.00
33	Providing, Installing, Testing & Commissioning, of Sludge handling Sludge Pump with Drain valve accessories with all accessories etc , transportation etc complete.Rate inclusive of all taxes. Make / Model : Utopia or Equivalent	33	Nos	1.00	520000.0	0.00	0.00	0.00	0.00	0.00	0.00

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SNo	Item Name	Item Code	Unit	Quantity	Rate	Previous Paid		Now to be Paid		Upto Date	
						Qty	Amount	Qty	Amount	Qty	Amount
	75% recommended	PR			390000.00	1.00	390000.00		0.00	1.00	390000.00
		BR			130000.00	0.00	0.00	1.00	130000.00	1.00	130000.00
34	Providing & Fixing, Installing, Testing & Commissioning, of Electricals and Instrumentation such as Pressure Indicator, Rotamete, Flow Switch, Flow Transmitters With Totaliser, Side Mounted Level Gauge, Level Gauge With Level Switch, Ball Valve, Butterfly Valves, pH Meter, Energy meter, GSM Controller with all parameters as mentioned in Technical specification and all necessary cabling with all accessories etc, transportation etc complete. Rate inclusive of all taxes. Make / Model : Utopia or Equivalent	34	Nos	1.00	695000.0	0.00	0.00		0.00	0.00	0.00
	75% recommended	PR			521250.00	1.00	521250.00		0.00	1.00	521250.00
		BR			173750.00	0.00	0.00	1.00	173750.00	1.00	173750.00
35	Providing & fixing, Installing, Testing & Commissioning of Microproceaser based control panel with all Accessories, transportation etc complete. Rate inclusive of all taxes. Make / Model : Utopia or Equivalent	35	Nos	1.00	580000.0	0.00	0.00		0.00	0.00	0.00
	75% recommended	PR			435000.00	1.00	435000.00		0.00	1.00	435000.00
		BR			145000.00	0.00	0.00	1.00	145000.00	1.00	145000.00
36	Making power supply connection to Eclear Reactor Unit with Accessories etc complete. Rate inclusive of all taxes. Make / Model : Rate inclusive of all taxes. Utopia or Equivalent	36	Job	10.00	67000.0	0.00	0.00		0.00	0.00	0.00
	75% recommended	PR			50250.00	10.00	50250.00		0.00	10.00	50250.00
		BR			16750.00	0.00	0.00	10.00	16750.00	10.00	16750.00

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4.9

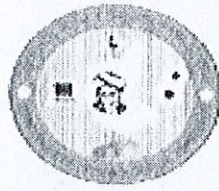
SNo	Item Name	Item Code	Unit	Quantity	Rate	Previous Paid		Now to be Paid		Upto Date	
						Qty	Amount	Qty	Amount	Qty	Amount
37	Testing & Commissioning of Software, Software development as per the requirement of client, Instrumentation assembly, Control panel assembly, Mechanical fittings, Piping ,Electric wiring , piping and pipe fitting,plumbing accessories, pipe support, labour Charges etc. complete.Rate inclusive of all taxes (In 1st RA, this PR qty has not included the bill. Hence, the upto date qty paid in the 2nd & final bill)	37	Job	1.00	710000.0	0.00	0.00	1.00	710000.00	1.00	710000.00
	Total Amount						10927000.03		6444139.13		17371139.16
	Say Rs.						10927000.00		6444139.00		17371139.00

Asst. Executing Engineer,
VTU, Belagavi

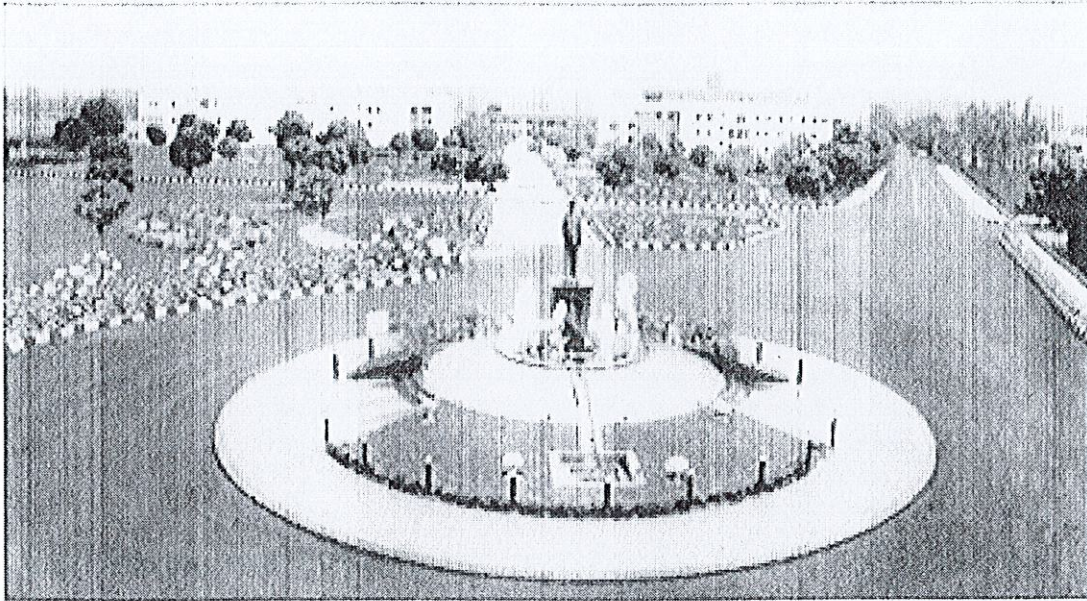
Reshanthappa
Resident Engineer,
VTU, Belagavi

R
Director

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*VISVESVARAYA TECHNOLOGICAL UNIVERSITY
JNANA SANGAMA BELGAUM*



*Providing Supplying, Installing, Testing &
Commissioning of Automated Non-Bacteriology
Sewerage Treatment Plant of 200 KLD.*

*Third Party Quality Audit Report
On R.A Bill No.IInd and Final*



KATCON CONSULTANTS BELGAUM

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**Internal Quality Assurance Cell
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**Visvesvaraya Technological University,
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4.12

Ref: KATCON/TPR/STP/R A II/614

Date: 28/09/2015

To,
The Registrar
VTU Belgavi,

SUB: Providing, supplying, testing and commissioning of automated non biological sewerage treatment plant 200KLD based on advanced Nano Technology enabled EMR (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at VTU Jnana Sangam Belgavi, - Conducting third Party Inspection Reg.

REF : Your letter No : VTU/RE/2015-2016/259 DTd: 24/09/2015 R A Bill no 2nd and final.

The R A Bill no 2nd and Final amounting to Rs.64, 44,139/- is received under letter cited above, for third party quantity Audit Report. The bill is received unsigned. The work was inspected on 27.09.2015, by Shri B, D Jadhav, N.G.Patil and S.B Ragashetty Engineers of Katcon Consultants. The following items are involved in the R A Bill no 2nd and final. The item wise comments are under:

SI No:	Item of work	Comments
1	Excavation for Foundation in ordinary soil	No Comments
2	Refilling pipe lines	No Comments
3	Providing and laying reinforced NP2 pipes	To check leakage if any water tightness/gas test is to be conducted.
4	Man hole chambers	Inspected & Accepted (before finalising)
6	M25 RCC Concrete	For M25 design mix have should have been obtained. However since the Test Results are satisfactory, the item is accepted.
7	TMT steel	The tests on steel have been conducted by GIT Belgavi on 31.09.2015 and are found to be satisfactory. Hence accepted.
8	Centering Work	No Comments
10	Providing and laying in position plain cement concrete of mix 1:3:6	No Comments
11	Filling in foundation below floor	No Comments
12	Providing and constructing burnt brick masonry	Brick should have been got tested. Since the quantity is only 25 cums it is accepted.
13	Providing 18mm thick cement plaster	Inspected & Accepted
14	Providing and Fixing Pre-coated Trapezoidal shaped sheets 24 gauge	Inspected & Accepted
15	Providing and laying Red oxide flooring 40mm	Inspected & Accepted
16	Pull and Push type rolling shutters	Inspected & Accepted
17	Providing top covers	Inspected & Accepted

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4.13



KARNATAK LAW SOCIETY'S
GOGTE INSTITUTE OF TECHNOLOGY

"Gnana Ganga"
UDYAMBAG, BELGAUM-590 008, KARNATAKA
(Affiliated to Visvesvaraya Technological University, Belgaum)
(APPROVED BY AICTE, NEW DELHI)
(ACCREDITED BY NBA, AICTE, NEW DELHI)



Dr. A.S.Deshpande
M.Tech., Ph.D., M.A.S.M.E.,
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S.T. No.-AAAAT3599EST001
PAN No.-AAAAT3599E

Ref. No. KLS/GIT/CIV/76/4454/2014-15

Date: 30-01-2015

TESTING REPORT

Client : Visvesvaraya Technological University, Belgaum
Reference : VTU/RE/2014-2015/391, Ltd. 5/01/2015.
Date of Testing : 20/01/2014
Name of Work : Construction of (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at "Jnana Sangama" VTU, Belgaum.
Test on : Coarse Aggregate
(Supplied by M/s Utopia Automation control Pvt.Ltd.)

Test on Coarse Aggregate

Sl.No.	Test	Test result
1	Specific Gravity	3.1
2	Water absorption	0.8 %
3	Fineness modulus	3.45

Remark: Nil

Tested By :

V.K. Parvati
Prof. V.K.Parvati

[Signature]
H.O.D, Civil Engg.
PROFESSOR & HEAD
Civil Engineering Department,
Gogte Institute of Technology,
Udyambag, Belgaum - 590 008

[Signature]
Director
Internal Quality Assurance Cell
(IQAC)
Visvesvaraya Technological University,
Belgaum - 590018



[Signature]
PRINCIPAL
GOGTE INSTITUTE OF TECHNOLOGY
UDYAMBAG BELGAUM 590008

4.19

KARNATAK LAW SOCIETY'S
GOGTE INSTITUTE OF TECHNOLOGY

"Gnana Ganga"
 UDYAMBAG, BELGAUM-590 008, KARNATAKA
 (Affiliated to Visvesvaraya Technological University, Belgaum)
 (APPROVED BY AICTE, NEW DELHI)
 (ACCREDITED BY NBA, AICTE, NEW DELHI)



Dr. A.S.Deshpande
 Ph.D., M.A.S.M.E.,
 M.I.E.E.(USA) M.I.E.,
PRINCIPAL

☎ : (Off) : (0831) 2405500, 2405506
 Fax : (0831) 2441909
 Res. : (0831) 2440869
 E-mail : a.s.deshpande@git.edu
 S.T. No.-AAAAT3599EST001
 PAN No.-AAAAT3599E

Ref. No. KLS/GIT/CIV/76/4454/2014-15

Date: 30-01-2015

TESTING REPORT

Client : Visvesvaraya Technological University, Belgaum
Reference : VTU/RE/2014-2015/391, Ltd. 5/01/2015.
Date of Testing : 20/01/2014
Name of Work : Construction of (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at "Juana Saugama" VTU, Belgaum.
Test on : Cement (Supplied by M/s Utopia Automation control Pvt.Ltd.)

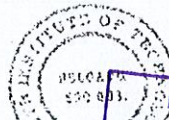
Test on Cement:

SIL No	Description	Result Values
1	Identification	ACC Cement
2	Type of cement O.P.C/ Pozzolana/PSC:	O.P.C (43 Grade)
3	Normal consistency percentage:	32%
4	Initial Setting time:	180 Minutes
5	Final Setting time:	360 Minutes
6	Specific Gravity	2.89
7	Fineness	5 %
8	Crushing strength N /mm ² (Mortar Cubes) 1) 3 days 2) 7 days 3) 28 days	23.50 N/mm ² 28.10 N/mm ² To be tested

Tested By:

V.K. Parvati
 Prof.V.K.Parvati

[Signature]
 HOD Civil Engineering



Director

Internal Quality Assurance Cell (IQAC)
 Visvesvaraya Technological University,
 Belgavi - 590018



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KARNATAK LAW SOCIETY'S
GOGTE INSTITUTE OF TECHNOLOGY

"Gnana Ganga"

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(ACCREDITED BY NBA, AICTE, NEW DELHI)



Dr. A.S.Deshpande

M.Sc., Ph.D., M.A.S.M.E.,

E.W. I.E.E.E.(USA) M.I.E.

PRINCIPAL

☎ : (Off) : (0831) 2405500, 2405506

Fax. : (0831) 2441909

Res. : (0831) 2440869

E-mail : a.s.deshpande@git.edu

S.T. No.-AAAAT3599EST001

PAN No.-AAAAAT3599E

Ref. No. KLS/GIT/CIV/76/4454/2014-15

Date: 29-09-2014

TESTING REPORT

- Client** : Visvesvaraya Technological University, Belgaum
- Reference** : VTU/RE/2014-2015/391, Ltd. 5/01/2015.
- Date of Testing** : 20/01/2014
- Nature of Work** : Construction of (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at "Jnana Sangama" VTU, Belgaum.
- Test on** : Sand (Supplied by M/s Utopia Automation control Pvt.Ltd.)

Test on Sand

S.S.No.	Test	Test result
1	Specific gravity	2.46
2	Bulkage	6%
3	Silt content	4%
4	Fineness Modulus	3.19

Remarks : Nil

Tested By :

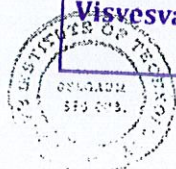
V.K. Parvati

H.O.D. Civil Engg.
Professor & Head
Engineering Department,
Gogte Institute of Technology,

Director

**Internal Quality Assurance Cell
(IQAC)**

**Visvesvaraya Technological University,
Belgavi - 590018**



(PRINCIPAL
PRINCIPAL

GOGTE INSTITUTE OF TECHNOLOGY
UDYAMBAG, BELGAUM-590008

4.16

KARNATAK LAW SOCIETY'S
GOGTE INSTITUTE OF TECHNOLOGY



"Gnana Ganga"
UDYAMBAG, BELGAUM-590 008, KARNATAKA
(Affiliated to Visvesvaraya Technological University,
Belgaum)
(APPROVED BY AICTE, NEW DELHI)
(ACCREDITED BY NBA, AICTE, NEW DELHI)

Dr. A.S.Deshpande
M.Tech., Ph.D., M.A.S.M.E.,
S.M. I.E.E.E.(USA) M.I.E.,
PRINCIPAL

☎ : (Off) : (0831) 2405500, 2405506
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E-mail : a.s.deshpande@git.edu
S.T. No.-AAAAT3599EST001
PAN No.-AAAAT3599E

Ref.No. GIT/BGM/CIV / 76 / 4454 / 2014-15

Date: 30-01-2015

TESTING REPORT

Client : Visvesvaraya Technological University, Belgaum
Reference : VTU/RE/2014-2015/391, Ltd. 5/01/2015.
Date of Testing : 20/01/2014
Name of Work : Construction of (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at "Jnana Sangama" VTU, Belgaum.
Test on : Steel (TMT) (Supplied by M/s Utopia Automation control Pvt.Ltd.)

TEST REPORT

Sl.No.	Particulars / Invoice No.	Sp-1	Sp-2	Sp-3
1	Wt/m (gms/m)	400	586	843
2	Actual dia on wt.basis (mm)	8.06	9.75	11.7
3	Nominal dia (mm)	8	10	12
4	C/S Area (cm ²)	0.51	0.75	1.07
5	Proof Load (Kg)	2800	3500	5300
6	Proof Stress (Kg / cm ²)	5490	4667	4953
7	Ultimate Load (Kg)	3200	4500	6900
8	Ultimate Stress (Kg / cm ²)	6275	6000	6449
9	Gauge Length (mm)	40	50	60
10	Final Gauge Length (mm)	49	62	74
11	Percentage Elongation	22.5	24	23.3

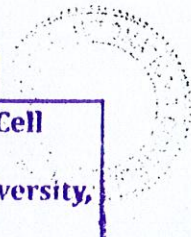
Bend Test : No Cracks Observed
Rebend Test : No Cracks Observed
Remarks : Nil

Tested by: Prof.V.K.Parvati

HOD, Civil Engineering
PROFESSOR & HEAD
Civil Engineering Department



Director
Internal Quality Assurance Cell (IQAC)
Visvesvaraya Technological University,
Belgavi - 590018



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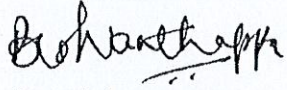
VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

RESIDENT ENGINEER SECTION

List of Documents Enclosed to the Final Bill of Providing, Supplying, installing, Testing & commissioning of Automated Non bacteriological sewage Treatment Plant of 200 KLD based on Advanced Nano-Technology enabled EMR (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at VTU, "Jnana Sangama" Belagavi

Name of Contractor: M/s. Utopia Automation & Control Pvt. Ltd., Satara

1. The Completion Certificate in form No PWG-46
2. The Completion Report in form No PWG-47
3. The Completion Certificate
4. Agreement Copy
5. List of Advances
6. Estimate Copy
7. Excess & Savings Statement
8. Royalty Statement
9. Q.C. Test Report


Resident Engineer
VTU, Belagavi


Director
Internal Quality Assurance Cell
(IQAC)
Visvesvaraya Technological University,
Belgavi - 590018

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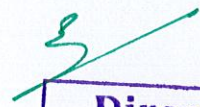
VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
FORM NO.PWG 46
Completion Certificate

- 1) Name of Section: Resident Engineer, V.T.U, "Jnana Sangama", Belagavi
- 2) Name of work: Providing, Supplying, installing, Testing & commissioning of Automated Non bacteriological sewage Treatment Plant of 200 KLD based on Advanced Nano-Technology enabled EMR (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at VTU, "Jnana Sangama" Belagavi
- 3) Sanctioned estimate Amount: Rs.1,50,00,000=00
- 4) Agency: M/s. Utopia Automation & Control Pvt. Ltd., Satara
- 5) Authority: Agreement No. VTU/IRC No.10/2014-15, Dt:31-10-2014
- 6) Date of commencement: 08-11-2014
- 7),Due date of completion:08-05-2015
- 8) Actual date of completion: 17-09-2015
- 9) Time Extension granted up to: 31-09-2015(without penalty)
- 10) Name of Engineer & Subordinate:

By whom the work has been supervised giving the details of their personal incumbencies etc., date of taking and handing over the charge in connection their with

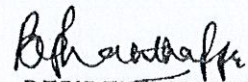
Sl. No.	Name and designation	Period of incumbency From	Period of incumbency To
1	Sri Anand Rogannavar I/c. A.E.E.,	08-11-2014	17-09-2015
2	Dr. B. C. Shanthappa, Resident Engineer,	08-11-2014	17-09-2015

Certificate: Certified that the work of Providing, Supplying, installing, Testing & commissioning of Automated Non bacteriological sewage Treatment Plant of 200 KLD based on Advanced Nano-Technology enabled EMR (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at VTU, "Jnana Sangama" Belagavi inspected by me on 17-09-2015 and completed satisfactorily as per terms and conditions of contract agreement.



Director

**Internal Quality Assurance Cell
(IQAC)
Visvesvaraya Technological University,
Belgavi - 590018**


**RESIDENT ENGINEER
VTU, BELAGAVI**

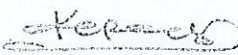
Completion Certificate

- 1) Name of work: Providing, Supplying, installing, Testing & commissioning of Automated Non bacteriological sewage Treatment Plant of 200 KLD based on Advanced Nano-Technology enabled EMR (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at VTU, Jnana Sangama" Belagavi.
- 2) Name of contractor: M/s. Utopia Automation & Control Pvt. Ltd., Satara
- 3) Date of commencement: 08-11-2014
- 4) Due date of completion: 08-05-2015
- 5) Time Extension granted up to: 31-09-2015(without penalty)
- 6) Actual date of completion: 17-09-2015
- 7) Estimated cost:Rs.1,50,00,000.00
- 8) Cost put to tender: Rs.1,50,00,000.00
- 9) Cost of work at tendered rate: Rs.1,51,40,965.00
- 10) Actual expenditure incurred: Rs.1,73,71,139.00
- 11) Whether the work has been completed satisfactorily: "Yes"

CERTIFICATE

Certified that the work has been completed satisfactorily as per the terms and conditions of contract agreement and as per prescribed specifications.


Director
Internal Quality Assurance Cell
(IQAC)
Visvesvaraya Technological University,
Belgavi - 590018


REGISTRAR,
VTU, BELAGAVI

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
FORM NO.PWG 47
Completion Report

Name of work: Providing, Supplying, installing, Testing & commissioning of Automated Non bacteriological sewage Treatment Plant of 200 KLD based on Advanced Nano-Technology enabled EMR (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at VTU, Jnana Sangama" Belagavi.

Name of contractor : M/s. Utopia Automation & Control Pvt. Ltd., Satara

Date of commencement : 08-11-2014

Due date of completion : 08-05-2015

Time Extension granted up to: 31-09-2015(without penalty)

Actual date of completion : 17-09-2015

Sr. no	Name of work	Estimated amount Put to tender (Rs)	Tendered amount (Rs)	Expenditure (Rs)	Excess or Savings (Rs)	% Of Savings or Excess	Remarks
1	Providing, Supplying, installing, Testing & commissioning of Automated Non bacteriological sewage Treatment Plant of 200 KLD based on Advanced Nano-Technology enabled EMR (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at VTU, Jnana Sangama" Belagavi	1,50,00,000/-	1,51,40,965/-	1,73,71,139/-	22,30,174 Excess	14.72% Excess	Excess is due to additional work taken such as sewage line from P. G. Block South to Ring Road & Library to Ring Road connected to sewage line which were not in the tender.

II. By whom executed: 1) Dr. B. C. Shanthappa, R.E.,

3) Shri Anand Rogannavar, I/c. AEE.,

III. Date of last inspection of Resident Engineer: Dr. B. C. Shanthappa, R.E.,

IV. Name of the officials who took final measurements & also inspected:

1) Dr. B. C. Shanthappa, R.E.,

B. C. Shanthappa

2) Shri Anand Rogannavar, I/c. AEE.,

Shri Anand Rogannavar

P.T.O.

Director

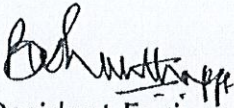
**Internal Quality Assurance Cell
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Visvesvaraya Technological University,
Belgavi - 590018**

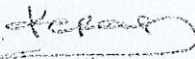
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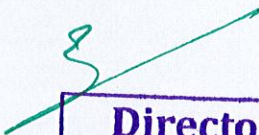
CERTIFICATE:

Inspected by me personally on the date noted below and certified that the work of Providing, Supplying, installing, Testing & commissioning of Automated Non bacteriological sewage Treatment Plant of 200 KLD based on Advanced Nano-Technology enabled EMR (Electro Membrane Reactor) process with GSM enabled remote monitoring system and allied works at VTU, "Jnana Sangama" Belagavi entrusted to M/s. Utopia Automation & Control Pvt. Ltd., Satara has been completed satisfactorily as per terms and conditions of contract agreement and as per specification.

Asst. Executive Engineer,
V.T.U., Belagavi


Resident Engineer
V.T.U., Belagavi
28/09/15


Registrar
V.T.U., Belagavi.


Director

**Internal Quality Assurance Cell
(IQAC)
Visvesvaraya Technological University,
Belgavi - 590018**